Model Core Curriculum Project
Lead Team meeting
Nov. 14-15, 2005
Des Moines Botanical Center

Purpose Statement for Project Lead Team
The purpose of the Project Lead Team is to collaborate with subcommittees in identifying the essential content and skills of a world-class core curriculum and present its findings to the State Board of Education in partial fulfillment of SF 245. The model core curriculum will focus on the areas of literacy, mathematics, and science. The intent of this work is two-fold: 1) to ensure that all Iowa students have access to a rigorous and relevant curriculum to prepare them for success in post-secondary education, the workforce, and the emerging global economy, and 2) to provide a tool for Iowa educators to use to assure that essential subject matter is being taught and essential knowledge and skills are being learned.

Nov. 14, 2005
Present: Timothy Ansley, Ray Beets, Linda Berg, Hope Bossard, Sherry Brown, Bill Callahan, Bob Driggs, Vicki Goldsmith, Steve Goodall, Dale Gruis, Barb Guy, Eric Hart, Diane Crookham Johnson, Alissa Jourdan, Rita Martens, Kathy McKee, Mary Jean Montgomery, Susie Olesen, Susan Pecinovsky, Pam Pfitzenmaier, Gary Phye, Jim Reese, LuAnn Richardson, Luanne Schneider, Judith Spitzli, Kristin Steingreaber, Warren Weber
Absent: John Dunkhase, Tony Heiting, Shirley Kelly, Kris Mesicek, Tara Richards, Phyllis Staplin

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The scope and shape of secondary education needs transformation as students increasingly arrive in high schools well-versed in a world of instant-messaging, video-gaming, multi-tasking, and living daily surrounding by computer chips. They should not be expected to “power down” when they walk into a classroom. That was the message driven home over two days of discussions and presentations with lead team members.

The challenge is how best to chart the path to a new high school curriculum that meets this need for new learning styles. Experts in the field are pressing educators to ask tough questions:
- Do your classes focus on the right standards?
- Are you teaching the right curriculum?
- Are teachers creating the best learning environment?
- How do you best assess mastery of these new, higher-order skills?

A handful of possible strategies were presented over two days of meetings. Team members were briefed on the latest approaches by ACT and Iowa Testing Programs, both based in Iowa City, and from national educational experts Willard Daggett, Dick Jones and Chris Dede.

The lead team also brainstormed about how best to equip the three work teams being created this month. The members even talked a bit about how best to present the resulting curriculum proposals – for example, should it be web-based to make it a living, breathing document. The group recognizes that the needs of today’s environment are changing fast.

Chris Dede, Wirth Professor, Harvard University
Day One began with a live videoconference by Harvard Professor Chris Dede, who is passionate about the need to change teaching styles to effectively reach this new “Net Generation”. He reviewed cutting-edge efforts to apply a video-game-like learning environment to deliver higher-level, complex learning. His project, funded in part by the National Science Foundation, is called a

"multi-user virtual environmental experiential simulator" (MUVEES). There, students explore virtual cities and interact with fellow students to answer sophisticated scientific questions (http://www.gse.harvard.edu/~dedech/muvees/user) Rather than listen to a lecture on environmental problems, the students use a handheld computer and enter a virtual reality world where real-time problems crop up and students must develop solutions on the fly. They come away armed with the same higher-learning skills they'll need eventually in the workplace.

Just a few years ago, educators thought the only way to fuse technology and the classroom would be to issue laptops to every student, a prohibitively expensive proposition. But Dede says new wireless mobile devices and PDAs can offer 60 percent of a laptop's power at 10 percent of the cost. Early reports from the MUVEES tests show strong results and not just with high-end performers. Even lower-performing students get fired up when they realize they can combine a love of technology with higher-level learning. Still, hurdles remain to rolling this out in any broadbased way. While scripting these new learning approaches can be relatively easy, Dede says, assessing performance remains a challenge.

ACT and college-readiness

Doug Becker, vice president of ACT educational services, briefed team members on the keys to college preparedness.. The percentage of students taking remedial courses in colleges has been climbing – 63 percent at public two-year colleges, 38 percent at public four-year colleges and 17 percent at private four-year colleges. "Some estimate it's become a billion-dollar problem," said Becker. And the greater a student's need for remedial courses, the less likely he or she is to earn a degree, ACT found.

In its search for the keys to college readiness, ACT identified ten schools that were producing top ACT test scores. The ten represented nine states including two that were predominantly minority, one rural district and several serving inner-city populations. The conclusions: These schools consistently deliver high-level, college-oriented courses, boast experienced teachers, offer strong tutoring and have a track record for weaving in life experiences to make coursework more relevant.

Iowa students fare better than most at college readiness, Becker showed. But there was still room to improve. Only 25 percent of Iowa students taking the ACT met all four college readiness benchmark scores – in English, Math, Reading and Science. The strongest showing came in English, where 77% of Iowa students were "ready". In contrast, just 34 percent of the Iowans met the Science benchmark.

Becker said ACT sees a direct link between higher college readiness and a stronger diet of "core courses": four years of English, three years of math, three of social sciences and three of natural/physical sciences. And it's not just ANY science or math courses. College readiness jumps when students have taken calculus, physics, and 4th-year English/speech

ACT is urging schools to raise curriculum standards to these higher college-readiness levels. To assist schools in evaluating student readiness, ACT has also developed both an 8th grade and 10th grade screening test. That prompted someone to ask Becker if ACT is moving from the realm of testing to also driving curriculum decisions in the high schools. Becker merely called it a "logical next step" for his organization.

Not all members were buying the ACT conclusions. Some disagreed with the so-called "best practices" highlights from the ten participating schools. Others argued that getting students enthused and prepared still must reach beyond course offerings and into teaching approaches, echoing Chris Dede.

Iowa Testing Services

Iowa Testing Services, originators of the Iowa Test of Basic Skills, also laid out some options for evaluating student progress in core subjects. Tim Ansley, assistant director of the Iowa High

School Testing Program and director of the Iowa Algebra Aptitude Testing Program *check title*, said ITS is rolling out some multiple choice tests in key math and science areas that can be used something like a final exam and scored locally. Current plans call for testing these new exams this spring and a full rollout in spring of '06. The tests are design to be appropriate for all students, inexpensive and linked to universal requirements. "We are not trying to dictate curriculum," said Ansley, who is a lead team member. He described ITS's efforts as measuring a "common core of objectives."

Rigor and Relevance

In an DVD viewed by the task force, Willard Daggett and Dick Jones explained their case for rigorous coursework that is relevant in today's economy. "Somehow we need better data on what is essential, rather than on what is nice to know," said Daggett, who is president of the International Center for Leadership in Education. In their view, the key is focusing on higher-level thinking skills and the application of information to real life situations. Jones describes the two continuums that comprise the framework: the thinking continuum and the action continuum. The action continuum consists of five levels:

1. Acquiring knowledge of one discipline.
2. Applying that knowledge within the discipline.
3. Applying that knowledge across disciplines.
4. Applying it in real world predictable situations.
5. And finally, applying it in real world unpredictable situations.

The thinking continuum is oftentimes known as Bloom's taxonomy and consists of six levels:

1. Awareness
2. Comprehension
3. Application
4. Analysis
5. Synthesis
6. Evaluation

Daggett's and Jones' work has become widely identified as the "Rigor and Relevance Framework, in which four quadrants each represent the types of knowledge students gather and ways in which it is applied (To see more on this topic, click on this link http://www.leadered.com/ and look for the "rigor and relevance " title).

Schools with the highest levels of rigor and relevance also had a strong program of student support – from family, peers, teachers, and community partnerships.

Discussion

Over the course of the two days, spin-off concerns surfaced among the lead team members -- teacher preparation issues, identifying what can be taken off teachers' plates to make way for this more relevant curriculum work, and even the sensitive issue of local control of school curriculum. On the latter, there was concern that even after all this curriculum work is completed next year, the recommendations may just wind up on a shelf unless there is leverage placed on districts to adopt it. Others tried to mitigate those worries, noting that districts have repeatedly told the Department of Education that they're hungry for direction on what they should be teaching. They simply don't want to be told *how* to teach it.

For now, the group was urged to stay on point, working solely on the core curriculum. But they also were told to consider this a starting, not an end, point. Recommendations for continued work or exploration of related issues still could be included in the final report to the State Board of Education.

What's next?

1. To assist the work teams in science, math and literacy, the lead team fleshed out key criteria - they called them "filters and lenses" – against which work team proposals will be assessed. Facilitators plan on refining the group's work for discussion at our next meeting

December's session for the lead team was cancelled to give the work teams more time. Invitations to work group members will be extended soon after Thanksgiving. Each team's initial meeting will take place by late December or early January. Work teams will have the opportunity to communicate with the lead team via ICN sessions, to be scheduled later.

Work teams could have some preliminary proposals ready when the lead team reconvenes Feb. 27-28 in Des Moines.